

USSN: 10/014,700
Atty. Docket No.: 10041/3
Amdt. dated October 8, 2003
Reply to Office Action of February 5, 2003

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A film structure comprising, as at least one surface layer, a porous membrane comprising an extruded, biaxially stretched[[,]] film of high density polyethylene (HDPE) and particles of an incompatible material incompatible with said HDPE, wherein;

said membrane layer has a meshed network of HDPE fibers and striations of layers coplanar with the plane of the membrane layer,

wherein said membrane layer is porous in a direction perpendicular to the plane of the film,

and wherein said membrane layer has a void content of at least 20%,

said HDPE has (1) a molecular weight of less than 250,000, (2) an intrinsic viscosity of less than 5 dl/g, and (3) an ASTM D 1238-86 condition E melt index of from 0.4 to about 4 grams/10 minutes, and

said incompatible material is included within said porous membrane in an amount of from 4 wt% to 24 wt%, based on the total weight of said porous membrane.

Claim 2 (original): A film structure according to claim 1, wherein said incompatible material is calcium carbonate.

Claim 3 (original): A film structure according to claim 1, wherein said surface membrane layer is treated with plasma at a temperature below the melting point of said HDPE.

Claim 4 (currently amended): A film structure according to claim 1, which is completely porous from one surface of the film to the other surface to of the film.

USSN: 10/014,700
Atty. Docket No.: 10041/3
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Claim 5 (currently amended): A filter, comprising the film structure according to claim 4 adapted for use as a filter or a battery separator.

Claim 6 (original): A film structure according to claim 1, wherein said membrane layer has a void content of 20-85%.

Claim 7 (original): A film structure according to claim 6, wherein said membrane layer has a void content of at least 50%.

Claim 8 (canceled).

Claim 9 (currently amended): A film structure according to claim 4, comprising a monolayer of film.

Claim 10 (currently amended): A film structure according to claim 1, comprising at least one noncavitated backing layer.

Claim 11 (new): A film structure according to claim 1, wherein the porous membrane has a lofting value of at least 3.

Claim 12 (new): A transdermal patch, comprising the film structure of claim 1.

Claim 13 (new): A film structure according to claim 1, wherein the porous membrane is free of residual plasticizer.

Claim 14 (new): A film structure, comprising (i) a porous surface layer comprising an extruded, biaxially stretched film of high density polyethylene (HDPE) and particles of a material incompatible with said HDPE, (ii) a porous core layer comprising an extruded, biaxially stretched film of HDPE and particles of a material incompatible with said HDPE, and (iii) a noncavitated backing layer comprising polypropylene or polyethylene, wherein:

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said porous surface layer (i) and porous core layer (ii) have a meshed network of HDPE fibers and striations of layers coplanar with the plane of the surface layer (i) and core layer (ii), respectively,

said porous surface layer (i) and porous core layer (ii) are porous in a direction perpendicular to the plane of the film,

said porous surface layer (i) and porous core layer (ii) independently have a void content of at least 20%,

said HDPE of said porous surface layer (i) and porous core layer (ii) independently has (1) a molecular weight of less than 250,000, (2) an intrinsic viscosity of less than 5 dl/g, and (3) an ASTM D 1238-86 condition E melt index of from 0.4 to about 4 grams/10 minutes, and

the amount of said incompatible material included within said porous surface layer (i) and porous core layer (ii) is independently from 4 wt% to 24 wt%, based on the total weight of said porous surface layer (i) and porous core layer (ii), respectively.

Claim 15 (new): A film structure according to claim 14, wherein said porous surface layer (i) and porous core layer (ii) are free of residual plasticizer.